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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/521,667

09/16/2005

Minoru Kuroda

5404/96

2297

757 7590 06/28/2007  
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EXAMINER

JUSKA, CHERYL ANN

ART UNIT

PAPER NUMBER

1771

MAIL DATE

DELIVERY MODE

06/28/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/521,667

Applicant(s)

KURODA ET AL.

Examiner

Cheryl Juska

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7, and 8 are rejected under 35 U.S.C. 103(A) as being unpatentable over US 2004/0185222 issued to Kuroda et al.

Kuroda discloses a step pile fabric having a long pile portion and a short pile portion (abstract). The short pile fabric includes an acrylic fiber having a flat cross-sectional shape in an amount of 20-80% by weight, preferably 30-70% by weight (sections [0008], [0010], and [0052]). The aspect ratio or flatting ratio of the acrylic fiber is preferably 3-20 (section [0035]). Said acrylic fiber has a dry heat shrinkage rate of 10-50% (section [0009]). The step pile fabric has a difference in pile length of at least 2 mm and an average length of the long pile portion of 12-25 mm (sections [0013] and [0014]). The acrylic fiber of the short pile preferably has a fineness greater than the fineness of the fiber of the long pile portion (section [0019]). Specifically, the short pile acrylic fibers have a fineness in the range of 3-30 dtex (section [0036]). The acrylic fiber is made of an acrylic polymer comprising 35-98% by weight acrylonitrile (section [0056]).

Thus, Kuroda teaches the presently claimed invention with the exception that the fiber fineness of the long pile portion is 0.7-8 dtex and the fineness relationship given by the equation

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recited in the claim. However, short of a showing of unexpected results obtained from the claimed fineness and fineness ratio, it is held that these features are obvious over the cited prior art. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215. An decrease in the linear density of a fiber produces a finer, more flexible fiber, while an increase produces a coarser, more stiff fiber. Additionally, in a pile fabric of the kind disclosed by Kuroda, the a greater difference of linear densities between the long and short pile portions would produce a more noticeable difference between the pile portions and a complex hand. Therefore, claims 1-5, and 7 and 8 are obvious over the cited prior art.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the cited Kuroda reference in view of US 5,976,693 issued to Miyoshi et al.

While Kuroda fails to teach the use of an organopolysiloxane on the surface of the fibers of the long pile portion, said use is well known in the art. Specifically, organopolysiloxanes are well known in the art as a finishing treatment for acrylic pile fabric, wherein said treatment smoothes the fibers and enhances the animal-like hand thereof. See Miyoshi, col. 1, lines 22-23. Hence, claim 6 is also rejected over the cited prior art.

### ***Conclusion***

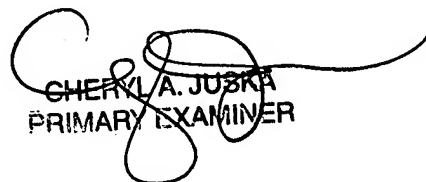
4. The art made of record and not relied upon is considered pertinent to applicant's disclosure.

5. Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached at 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CHERYL A. JUSKA  
PRIMARY EXAMINER

cj  
June 23, 2007